

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 01306254  
PUBLICATION DATE : 11-12-89

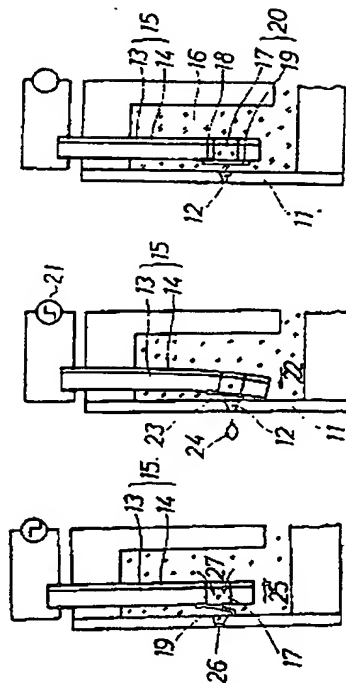
APPLICATION DATE : 03-06-88  
APPLICATION NUMBER : 63137886

APPLICANT : SEIKO EPSON CORP;

INVENTOR : HIGASHIMURA KOICHI;

INT.CL. : B41J 3/04

TITLE : INK JET HEAD



**ABSTRACT :** PURPOSE: To simultaneously improve various characteristics such as ink droplet discharging speed, amount and response by providing a fluid rectifier having ink rectifying function from the reverse side of a nozzle forming board to the board in a pressure generating member.

**CONSTITUTION:** When a voltage 21 is applied to a piezoelectric element 13, the element 13 is contracted, a pressure generating member 15 is deformed to the direction 22 of a nozzle by the bimetal action composed with a metal plate 14. Then, the pressure of ink presented in a gap 23 between the member 15 and a nozzle forming board 11 is enhanced, and ink droplet 24 is discharged from a nozzle 12. The recovery of the suction of a nozzle meniscus 26 after discharging is performed by the supply of ink corresponding to the deformation to the direction 25 of the member 15 by the ink flow 27 through a hole 17 passing the member 17 due to the deformation of a elastic sheet 19. This fluid rectifying element is composed only of a hole 17 passing the member 15 and the sheet 19 to provide a simple structure, thereby facilitating the manufacture thereof.

**COPYRIGHT:** (C)1989,JPO&Japio